Roland

GUITAR-MIDI INTERFACE

GI-10

OWNER'S MANUAL

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Introduction

Thank you for purchasing the **GI-10 guitar MIDI interface**.
The GI-10 is a guitar MIDI interface that converts information about what is played on a guitar into MIDI messages. While offering fast response, it is very easy to operate. Even newcomers to the realm of electronic instruments should easily be able to quickly achieve the results they expect.
To get the most out of your GI-10, and assure many years of problem-free service, please read this manual thoroughly before using it.

FEATURES

Fast Response

Leading-edge pitch detection technology assures unsurpassed speed for guitar-to-MIDI conversion.

Microphone Input

Allows voice or other forms of input to also be output as MIDI data.

Simple, Easy-to-Grasp Operation

Since there are only four buttons to be concerned with, even those who are new to electronic instruments can be up-and-running in no time. Moreover, all the available parameters and values appear right on the panel, so it's easy to tell at a glance where a particular parameter or setting is.

External Pedal Jacks

After connecting an expression pedal (EV-5; sold separately) to the expression jack, you will be able to use it to output data which alters the volume or applies vibrato. Also, a pedal switch (DP-2, BOSS FS-5U; sold separately) can be connected to the hold jack and used to output "hold" messages to your external MIDI device.

Mountable on 19-inch Rack

The optional RAD-50 rack mount adapter (sold separately) lets you mount the GI-10 on a rack.

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IMPORTANT NOTES

Be sure to use only the AC adaptor supplied with the unit. Use of any other AC adaptor could result in damage, malfunction, or electric shock.

Power Supply

- Before connecting this unit to other devices, turn off the power to all units; this will help prevent damage or malfunction.
- Do not use this unit on the same power circuit with any device that will generate line noise; an electric motor or variable lighting system for example.
- The power requirement for this unit is indicated on its nameplate (rear panel). Ensure that the voltage in your installation meets this requirement.
- Avoid damaging the power cord: do not step on it, place heavy objects on it, etc.
- When disconnecting the AC adaptor from the power outlet, grasp the plug itself; never pull on the cord.
- If the unit is to remain unused for an extended period of time, unplug the power cord.

Placement

- Do not subject the unit to temperature extremes (eg., direct sunlight in an enclosed vehicle). Avoid using or storing the unit in dusty or humid areas, or areas that are subject to high levels of vibration.
- Using the unit near power amplifiers (or other equipment containing large power transformers) may induce hum.
- This device may interfere with radio and television reception. Do not use this device in the vicinity of such receivers.

Maintenance

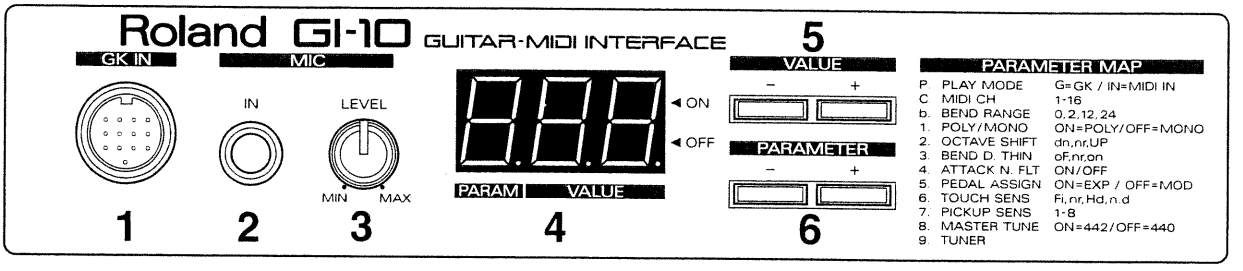
- For everyday cleaning wipe the unit with a soft, dry cloth or one that has been slightly dampened with water. To remove stubborn dirt, use a mild, non-abrasive detergent. Afterwards, be sure to wipe the unit thoroughly with a soft, dry cloth.
- Never use benzene, thinners, alcohol or solvents of any kind, to avoid the possibility of discoloration and/or deformation.

Additional Precautions

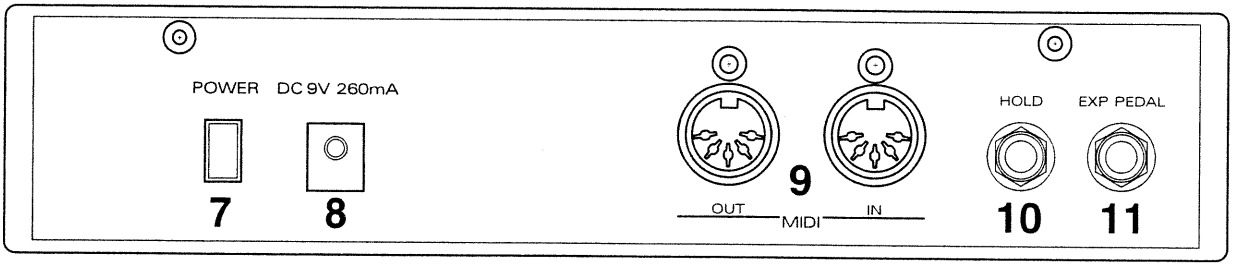
- Protect the unit from strong impact.
- Do not allow objects or liquids of any kind to penetrate the unit. In the event of such an occurrence, discontinue use immediately. Contact qualified service personnel as soon as possible.
- Never strike or apply strong pressure to the display.
- Should a malfunction occur, or if you suspect there is a problem, discontinue use immediately. Contact qualified service personnel as soon as possible.
- To avoid the risk of electric shock, do not open the unit or its AC adaptor.

Names of Things and What They Do

Front Panel



Rear Panel



1. GK IN Connector

Accepts connection of a special cable with a 13-pin connector that links this unit with the synthesizer driver (GK-2A; sold separately).

Note: The older GK-2 type can also be used.

2. MIC IN Jack

Used to connect microphones and guitars.

3. MIC LEVEL Knob

Used to adjust the input level of equipment connected to MIC IN.

4. Display

Displays the parameter number and its current value. Acts as a meter when using the tuner function or when adjusting the sensitivity.

5. Value Buttons (+ and –)

Used to increment/decrement the value for the current parameter, or turn on/off a setting.

* **Don't turn off the power while changing a value.**

6. Parameter Buttons (+ and –)

Pressed to switch among parameters.

7. Power Switch

Turns on/off the power to the GI-10.

8. Power Supply Jack

Accepts connection of the supplied AC adapter.
CAUTION: Never use any AC adapter other than the one supplied.

9. MIDI Connectors (IN / OUT)

These connectors are used to connect the GI-10 with external devices using MIDI cable. You need to run a cable from MIDI OUT to your external sound generating unit or sequencer in order to have this unit's MIDI data be sent to it, and to produce the guitar's sound or obtain other kinds of control.

10. Hold Jack (HOLD)

A pedal switch (DP-2, BOSS FS-5U; sold separately) can be connected to allow you to use hold effects on external MIDI device.

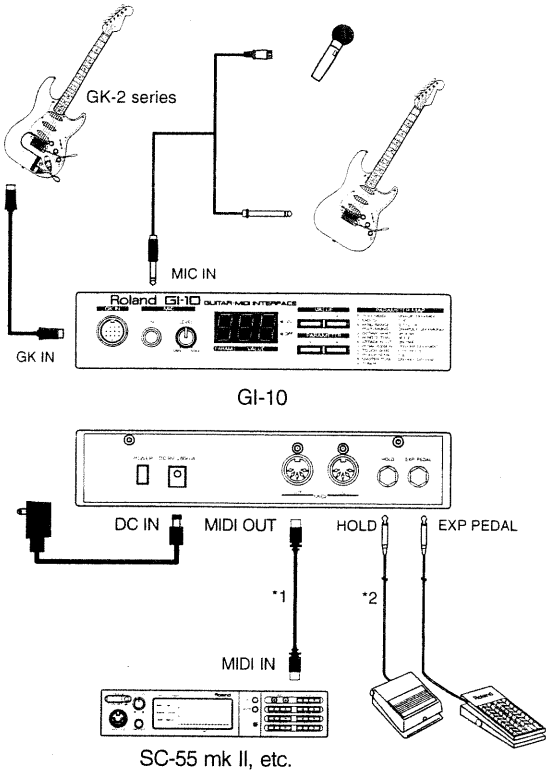
11. Expression Panel Jack (EXP PEDAL)

Connect a pedal (EV-5; sold separately) here to control the volume of an external device, or obtain vibrato effects.

1. Basic Connections

Connecting the GI-10

Always turn OFF the power on all your devices before making any connections. Connect the GI-10 to your MIDI unit using the supplied MIDI cable.



Notes

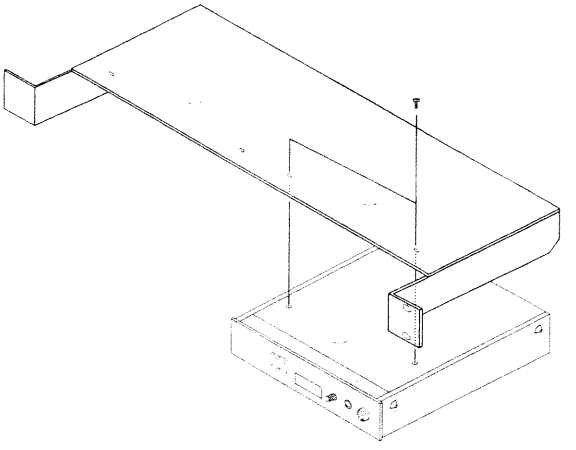
1. Other sections in this manual provide details about the various ways of connecting external units to the MIDI connectors. Refer to p. 8, 12, 18.
2. Refer to p. 15 for information on connection of a pedal switch to the hold jack.

IMPORTANT

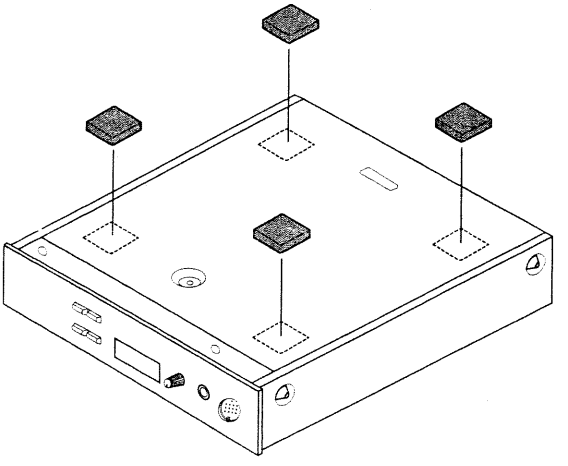
The MIC IN jack is given priority whenever you have something connected to both the GK IN connector and MIC IN jack. So, if a guitar connected to GK IN is played while a microphone or other device has been left connected to MIC IN, the data for the guitar will not be output from MIDI OUT. To have the guitar data be output, you first need to disconnect from the MIC IN jack.

Installing the Rack Mount Adapter

If you plan to use the optional RAD-50 rack mount adapter (sold separately), remove the two screws from the GI-10 (see diagram), and use them to secure the rack mount adapter in place.



If you are not going to be using a rack mount adapter, attach the rubber feet as shown.



2. Getting Ready

Turning On the Power

First, make sure that the AC adapter is connected. Then press the power switch on the rear panel to turn on the power (press it again to turn the power off).
The display will show the following screen:

GK mode

This indicates the normal display mode. The GI-10 has two Play modes: the **GK mode**, and the **MIDI IN mode**.

In the **GK mode**, the GI-10 converts signals that are input (by means of a guitar plugged into GK IN, or from a microphone plugged into MIC IN) into MIDI data, and outputs this data from MIDI OUT. If an external MIDI device is connected to MIDI IN, none of the MIDI messages from the external MIDI device will be output through the GI-10's MIDI OUT connector.

MIDI IN mode

In the **MIDI IN mode**, all MIDI data arriving from an external MIDI device connected to MIDI IN is output as is from the MIDI OUT connector. No MIDI data conversion takes place, so whatever input that might be made using a guitar or microphone is ignored when in this mode.

Use the **VALUE** – or + buttons to switch between the two modes.

Tuning the Guitar

The GI-10 has an internal tuner which can be conveniently used to tune a guitar connected to the GK IN connector. Follow the steps below to tune your guitar.

CAUTION

The GI-10's internal guitar tuner only supports standard guitar tuning (6th string: E; 5th string: A; 4th string: D; 3rd string: G; 2nd string: B; 1st string: E). The reference pitch set at the factory is A=440.0. Refer to p. 16 for information on changing the reference pitch.

<Operation>

1. Press the PARAMETER – or + button until you have 9. TUNER selected.

2. Play the 6th string and the string number shown will change to 6.

If the pitch of the 6th string is more than a half-step higher or lower than E, the display will show the following:

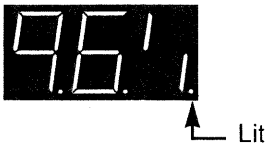
When low

When high

Now, rotate the peg while picking the 6th string until the right-most character of the display begins rotating. The group of LCD segments (forming the first character from the right) in the display will rotate whenever the string's pitch becomes less than a half-step away from the correct pitch.
If it rotates clockwise, it indicates the tuning is slightly higher than the actual tone. Counter-clockwise rotation means it is lower.

3. Keep tuning the string until the LCD segments slow to a stop.

A dot should then appear in the display's lower-right corner. This means that the 6th string has been perfectly tuned to E.



4. Repeat the process for strings 5 to 1.

Parameter Selection

Press the PARAMETER buttons to select from the twelve parameters. The number or letter that appears in the left-most column of the display indicates which parameter you currently have selected. The meaning of the number or letter can be found in the **Parameter Map** on the front panel.

PARAMETER MAP		
P.	PLAY MODE	G=GK / IN=MIDI IN
C.	MIDI CH	1-16
b.	BEND RANGE	0, 2, 12, 24
1.	POLY/MONO	ON=POLY/OFF=MONO
2.	OCTAVE SHIFT	dn,nr,UP
3.	BEND D. THIN	oF,nr,on
4.	ATTACK N. FLT	ON/OFF
5.	PEDAL ASSIGN	ON=EXP / OFF=MOD
6.	TOUCH SENS	Fi, nr, Hd, n.d
7.	PICKUP SENS	1-8
8.	MASTER TUNE	ON=442/OFF=440
9.	TUNER	

* You can switch to the P. PLAY MODE page by pressing the **PARAMETER** – and + buttons at the same time.

Divided Pickup Sensitivity Adjustment

If the GI-10 is being used for the first time with a synthesizer driver (GK-2 series), the sensitivity for each string needs to be adjusted. These sensitivity adjustments remain stored even while the power is off, so they only have to be set once.

What is a divided pickup?

A divided pickup is a pickup capable of detecting the string vibrations for each string separately, such as the one used in the GK-2 series.

IMPORTANT

You need to adjust the sensitivity over again in the following situations:

- When using a different guitar.
- When adjustments have been made that affect the manner in which the divided pickup is mounted.
- When all GI-10 settings have been initialized. (p. 23)

<Procedure>

1. Press the PARAMETER + or – button to select 7. PICKUP SENS.

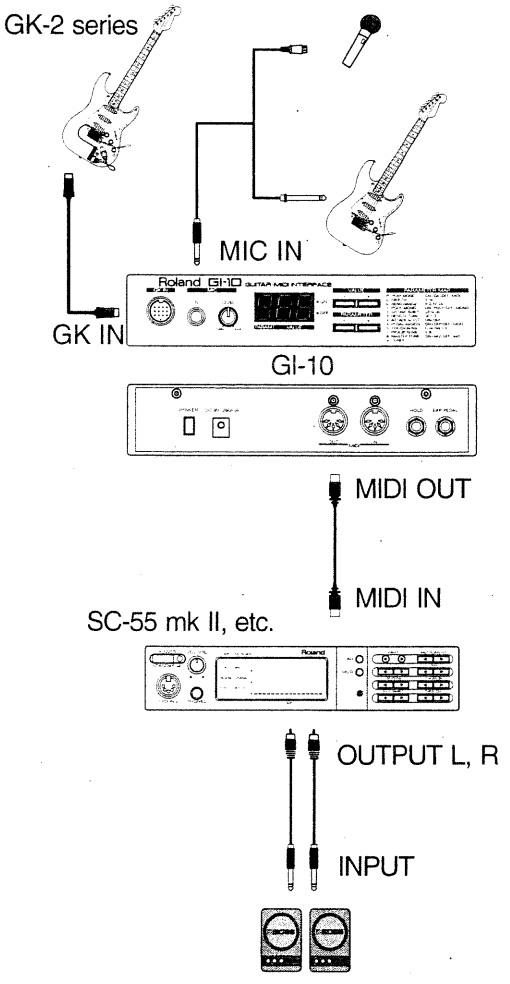
2. Play the open 6th string to display string number (6).

3. When the sensitivity setting is correct, the dot at the lower-right corner in the display will light occasionally when the string is played hard. Play the string hard and adjust as necessary. Adjustment is made with the VALUE + and – buttons.

4. Adjust strings 5—1 in the same way.

3. Sounding an External MIDI Sound Generator

Making the Connections



IMPORTANT

If the GK IN connector and MIC IN jack are used simultaneously, the MIC IN jack will have priority. If a microphone or other device is connected to MIC IN and a guitar is connected to GK IN, the guitar sound will not be output through the MIDI OUT connector. Disconnect the equipment from the MIC IN jack first.

Playing a Guitar with a Divided Pickup

Now let's try triggering (playing) an external MIDI sound generator using a guitar with a GK-2 series pickup and the GI-10.

<Settings for the external MIDI sound generator>

1. Specify whether reception is to use the Poly mode or the Mono mode. Refer to p. 10 for details.

2. Set the MIDI receive channel.

When receiving in Mono mode, allocate six consecutive MIDI channels; one for each string.

3. Set the Bend Range for the channel(s) used for reception.

On the GI-10, the Bend Range to be transmitted can be set to 0, 2, 12 or 24.
For a smoother representation of pitch changes across a larger range, use the largest value that your MIDI sound generator supports.(To recreate the performance techniques of a guitar as faithfully as possible, try using a setting of 12 or 24.)

When receiving in Mono mode, set the Bend Range for all six MIDI channels.

4. Select the sounds.

Assign the sound you want to have played to the MIDI receive channel.
When receiving in Mono mode, select a sound for each of the six MIDI channels. If you wish, you can select different sounds for each channel (each guitar string).

For details on setting up, refer to the manual that came with your MIDI sound generator.

<GI-10 settings>

1. Set the play mode to GK.

Press the **PARAMETER** + or – button to select P. PLAY MODE.

Press the **VALUE** + or – button to change the GK mode.

2. Set the send mode (Poly/Mono) to match the external MIDI sound generator setting.

Press the **PARAMETER** + or – button to select 1. POLY/MONO mode.

Press the **VALUE** + or – button to change the mode.

MONO mode

POLY mode

3. Select the MIDI transmit channel.

Press the **PARAMETER** + or – button to select C. MIDI CH.

Press the **VALUE** + or – button to select the transmit channel.

NOTE

If the GI-10 MIDI transmit channel is set to 12 (or higher) for Mono mode send, the value for the setting will start blinking. This indicates that channels 11 to 16 have been allocated to strings 1 to 6 (settings for 12 to 16 will be handled in the same way as for channel 11).

4. Set the Bend Range to match the setting for the external MIDI sound generator.

Press the **PARAMETER** + or – button to select b. BEND RANGE.

Press the **VALUE** + or – button to set the value.

If the Bend Range is set to 0, output will be made to the external MIDI sound generator in semitone steps, which is effective for sounds such as piano which produce fixed pitches.

This completes the setup. Play the guitar to trigger the specified sound(s) in the connected sound generator.

*** If the sound is not output...**

- Check the volume setting on the GK-2A/GK-2.
- Check the volume setting on the amplifier connected to the external MIDI sound generator.
- Check the connections with the external sound generator.
- Check that the play mode (p. 6) is set to GK.
- Make sure there is nothing connected to the MIC IN jack.

What is the Bend Range?

When continuous pitch changes (such as those produced when bending strings, or using the whammy bar) are sent to an external MIDI device, MIDI bend data is used. This requires that both the sending and receiving sides carry compatible settings for a bend range. The bend range determines the maximum amount of change that can occur when the sound generator receives MIDI bend data.

On the GI-10, the Bend Range can be set to 0, 2, 12 or 24 with the b. BEND RANGE parameter. A value of 2 means that the maximum bend range is ±2 semitones, 12 means the maximum bend range is ±12 semitones (2 octaves overall), and 24 means that the maximum bend range is ±24 semitones (4 octaves overall). By matching the bend ranges of the receive MIDI sound generator and the GI-10, it is possible to accurately convey continuous pitch variations. When the bend range is set to 0, MIDI data is sent in semitone units, so the external MIDI sound generator also sounds in semitone steps. This is effective for piano and similar instrument sounds which produce fixed pitches.

What are MIDI channels?

The GI-10 converts the input signal from the GK IN connector or MIC IN jack into MIDI data. MIDI stands for Musical Instrument Digital Interface, and is an international standard for the exchange of data between computers and musical instruments. MIDI data is exchanged only when both sending and receiving equipment are set to the same MIDI channel (channels range from 1 to 16). Refer to p. 9 for details on setting channels.

About the Poly/Mono modes...

The GI-10 provides two modes that can be used for sending MIDI data: the Poly mode and the Mono mode.

In the Poly mode, the data for all strings is sent using a single MIDI channel specified using the C. MIDI CH parameter. Because the guitar part uses only one MIDI channel, this allows the remaining channels to be used for other purposes. It also allows you to achieve satisfactory results using sound generators that are not capable of receiving on six channels at once. When multiple strings sound at the same time, however, the bend data is not sent, so all pitch changes occur in semitone steps. As a result, string bending techniques (for example) will not be fully reflected by the external MIDI device.

In the Mono mode, the data for each string is sent on its own MIDI channel. Six consecutive channels will be used, starting with the one specified for the C. MIDI CH parameter. So, if the MIDI transmit channel is set to channel 1, then channels 1 to 6 will be mapped to strings 1 to 6, in that order. For Mono mode send, continuous pitch change data is sent independently for each string, allowing for full representation of guitar performance techniques. However, you need to be using a multitimbral sound generating unit that offers 6 or more parts (or a unit capable of handling Mono mode reception even though it does not actually provide six parts, such as the Roland D-50/550, etc.).

Refer to p. 9 for details on setting the send mode.

Sounding External Sound Generator Using Device Connected to MIC IN

Signals from a microphone, or normal guitar output (i.e., not using a divided pickup) can be input to the GI-10's MIC IN for conversion to MIDI data.

<Setting the External Sound Generator>

The GI-10 converts the MIC IN signal into MIDI data, and this data is always sent in the Poly mode. This means it is set to only one part on the sound generating side. See left for details on Poly mode transmission.

1. Set the MIDI receive channel.

2. Set the MIDI receive channel Bend Range.

The Bend Range used for transmission by the GI-10 can be set to 0, 2, 12 or 24. Select the largest value which is supported by your MIDI sound generator.

3. Select the sound.

Select the sound to be played on the MIDI receive channel.

For details on setting up, refer to the manual that came with your MIDI sound generator.

<Setting the GI-10 >

1. Set the play mode to GK.

Press the **PARAMETER** + or – button to select the P. PLAY MODE.

Press the **VALUE** + or – button to change the play mode.

2. Set the MIDI transmit channel to match the external MIDI sound generator's MIDI receive channel.

Press the **PARAMETER** + or – button to select C. MIDI CH.

Press the **VALUE** + or – button to set the MIDI transmit channel.

3. Set the Bend Range.

Press the **PARAMETER** + or – button to select b. BEND RANGE.

Press the **VALUE** + or – button to set the value.

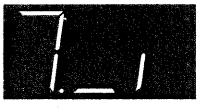
Set a value for Bend Range that matches the setting on the external MIDI sound generator. When the Bend Range is set to 0, MIDI data is sent in semitone steps, so the external MIDI sound generator also responds in semitone steps. This is effective for pianos and similar instruments which produce fixed pitches.

4. Adjust the microphone level

Press the **PARAMETER** + or – button to select 7. PICKUP SENS.

Use the **MIC LEVEL** knob to adjust the level.

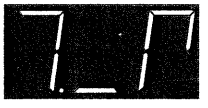
For voice and similar signals, the right-most column of the display serves as the level meter. The lighted LCD segments increase in a specific sequence, thus acting as a "meter" which indicates the strength of the input signal, as shown below.



State 1

State 2

State 3



State 4

State 5

State 6

For microphone input, the level increases as the state changes from 1 to 6. Adjust the microphone level using the **MIC LEVEL** knob so that the level meter is at state 5.

This completes the setup. Sing into the microphone and the external MIDI sound generator will produce the selected sound.

NOTE

When converting MIC IN signals into MIDI data, the Poly mode is always used, regardless of the setting in 1. POLY/MONO (see p. 9).

If the GK IN connector and MIC IN jack are used simultaneously, the MIC IN jack will have priority. If a microphone or other equipment is connected to MIC IN and a guitar is connected to GK IN, the guitar sound will not be output through the MIDI OUT terminal. To hear the guitar, disconnect the equipment from the MIC IN jack first.

Using a microphone, have the mouth fairly close to the microphone, and try to produce sounds with a strong attack. It also helps to clearly separate each tone produced.

If lyrics are simply sung in consecutive, normal fashion, the conversion to MIDI may not correct.

When you convert the sounds except a human voice (such as a saxophone's sound), the correctness of the conversion to MIDI may depend on the microphone setting.

Try to avoid having multiple notes, and play individual notes one by one.

Using an electric guitar, the response of the conversion to MIDI at low strings may be slower than when using an electric guitar with the devided pickup connected to the GK IN connector.

The sound range of the MIC IN is E2Å`D6. If GI-10 receives the notes that are beyond this range, the conversion to MIDI may not always correct.

As long as individual notes are sounded, many devices othe than a microphone or guitar could be used. However, you may not always be able to obtain a satisfactory conversion to MIDI.

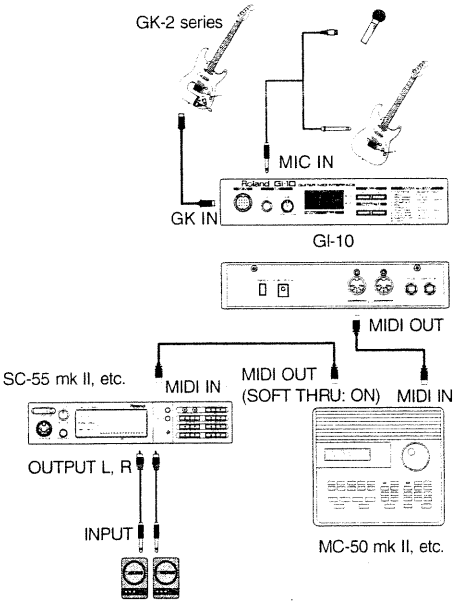
The maximum input level of the MIC IN is 230mV(RMS). If you input over this level, the conversion to MIDI may not always correct.

4. Recording with a MIDI Sequencer

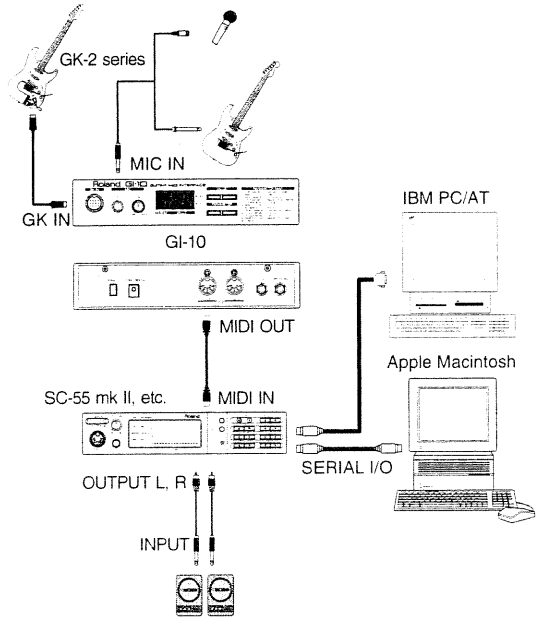
It is possible to connect the GI-10 to a MIDI sequencer (or computer with desktop music software) to allow realtime recording of your guitar performances.

Connections

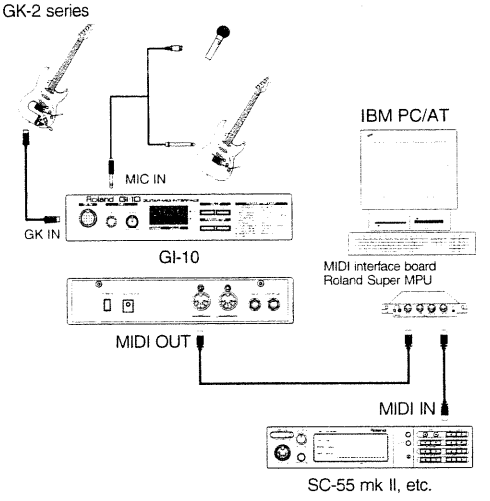
Connecting with a MIDI Sequencer



Directly connecting to computer device with serial interface



Connecting with a computer equipped with MIDI processing unit



* We recommend that you use a Roland Super MPU MIDI interface (S-MPU/PC, S-MPU/AT; separately available) when using the GI-10 with a computer. This is because the GI-10 can generate a very large amount of MIDI data (needed to smoothly express delicate pitch changes), and the serial port (RS-232C) on a computer may not be able to handle the data reliably, leading to notes being dropped, or unwanted holds occurring.

Input from a Divided Pickup

Let's try sending data from a guitar (with a GK-2 series pickup) into a sequencer.

<Procedure>

1. **Set the GI-10 send mode, MIDI transmit channel and Bend Range to match the sound generator and application, as described on p. 8.**

2. **Set the sequencer or desktop music software to "soft thru" so that the MIDI data from the GI-10 is transmitted to the connected sound generator during recording.**

3. **Play the guitar. If the sound generator is heard, the preparation is complete.**

4. **Set the sequencer for recording and begin when ready. When recording is complete, check the recorded result.**

NOTE

If your sequencer or desktop music software does not support multichannel recording, set the GI-10 to Poly mode send.

Input Using Equipment Connected to MIC IN jack

By connecting a microphone or guitar (without a divided pickup) to the GI-10 MIC IN jack, it is possible to convert the input data into MIDI data, and then record it on an external sequencer.

The MIC IN jack can only handle single notes. It will not respond to guitar chords, for example.

<Procedure>

1. **Set the GI-10 send mode, MIDI transmit channel and bend range to match the sound generator and application, as described on p. 10.**

2. **Set the sequencer or desktop music software to "soft thru" or equivalent function so the MIDI data from the GI-10 is flowed through into the connected sound generator during recording.**

3. **Play the guitar. If the sound generator responds, the preparation is complete.**

4. **Set the sequencer for recording and begin when ready. When recording is complete, check the recorded result.**

NOTE

If the GK IN connector and MIC IN jack are used simultaneously, the MIC IN jack will have priority. If a microphone or other equipment is connected to MIC IN and a guitar is connected to GK IN, the guitar data will not be output through the MIDI OUT terminal, so an external sound module cannot be sounded. Disconnect the equipment from the MIC IN jack first.

Handy Input Functions

The GI-10 also provides a "Bend Data Thin" feature and an "Attack Noise Filter."

<Procedure for Bend Data Thin>

1. Use the PARAMETER – or + button to select 3. BEND D.THIN.

2. Use the VALUE – or + button to set Bend Data Thin.

The values available for setting are as follows:

nr (NORMAL):
The normal setting. Constrains the amount of bend data sent to an amount suitable for the input capacity of the external device.

of (OFF):
No restrictions on the amount of bend data.

on (ON):
Bend data amount is reduced further than with the NORMAL setting.

What is Bend Data Thin?

To faithfully reproduce subtle changes in pitch, the GI-10 transmits a large amount of bend data to the external MIDI device.
When this data is input into a sequencer, however, the volume of bend data may exceed the sequencer's memory capacity, and cause errors.
The Bend Data Thin feature can be used to trim down the amount of bend data that is sent. The resulting pitch changes may not be as smooth as desired, but it minimizes problems with sequencer memory overflow.

<Procedure for Attack Noise Filter>

1. Use the PARAMETER – or + button to select 4. ATTACK N.FILT.

2. Use the VALUE – or + button to switch on/off the Attack Noise Filter.

Set to OFF

Set to ON

What is the Attack Noise Filter?

Immediately after a guitar string is played, the pitch of the guitar output signal is not stable. When this function is turned on, it waits for the pitch to stabilize before outputting the corresponding MIDI data to the external equipment.
Whenever you need to send clearly defined notes to an external device, you will want to turn this filter on.

5. Getting the Most from the GI-10

Sending Data Outside the Pitch Range of the Guitar

The GI-10 octave shift function can be used to output data (to an external MIDI device) which is one octave higher or lower than the actual guitar sound. This is handy, for example, if you want to play bass parts from your guitar.

<Procedure>

1. Use the PARAMETER – or + button to select 2. OCTAVE SHIFT.

2. Use the VALUE – or + button to set the value as follows:

nr: Performance data sent without alteration.

dn: Performance data sent one octave lower than actual pitch.

UP: Performance data sent one octave higher than actual pitch.

Using an Expression Pedal

By connecting an external pedal (Roland EV-5; sold separately) to the expression pedal jack(EXP PEDAL), it is possible to change the volume of the external MIDI sound generator, or add modulation (vibrato) effects. The function controlled by the pedal is defined in PEDAL ASSIGN.

<Procedure>

1. Use the PARAMETER – or + button to select 5. PEDAL ASSIGN.

2. Use the VALUE – or + button to set the value as follows:

At ON, expression (EXP):

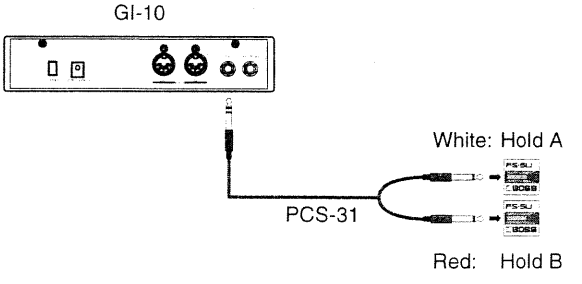
External MIDI sound generator volume increases when the pedal is depressed (MIDI control change data No. 11 sent).

At OFF, modulation (MOD):

Modulation applied to external MIDI sound generator when the pedal is depressed (MIDI control change data No. 1 sent).

Using the Hold Pedal

A footswitch can be connected to the hold jack (HOLD) to apply a sustain effect to the external MIDI sound generator. With a DP-2 switch (sold separately), hold type A can be sent to the external MIDI sound generator. If two BOSS FS-5U switches and a branching cable (PCS-31; sold separately) are added, hold types A and B can be used.

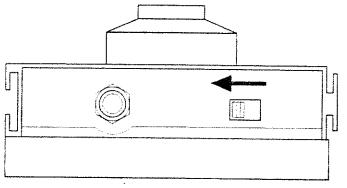


Hold type A

When the pedal is depressed, the external MIDI sound generator continues to sound for a selected string, even if the actual string stops vibrating. When the pedal is released, the sound stops. String sounds that are not sustained are sent normally to the external MIDI sound generator.

Hold type B
When the pedal is depressed, the sound is sustained. The sound stops when the pedal is released.

CAUTION
Set the FS-5U polarity switch as follows:



Select the optimum picking characteristics

Use the TOUCH SENS parameter to select the optimum picking characteristics (response to play). If picking with your fingers, for example, set TOUCH SENS to "Fi" (finger picking) for a more natural representation.

<Procedure>

1. Use the PARAMETER – or + button to select 6. TOUCH SENS.

2. Use the VALUE – or + button to set the value to one of the four below:

Fi (finger picking)
The setting is optimized for representation of finger picking. Sensitivity is higher than the normal setting.

nr (normal picking)
General-purpose picking.

Hd (hard picking)
For people who play hard. Sensitivity is lower than the normal setting. If the guitar is built so that the divided pickup (see p. 7) can only be mounted close to the strings, this setting may improve performance.

n.d (no dynamics)
The external MIDI sound generator responds at a fixed volume level, regardless of your playing strength. When used with synthesizer leads and organs, it is possible to deliberately produce an "expressionless" output.

Tuning to an External MIDI Sound Generator

On the GI-10 the MASTER TUNE parameter can be used to set the frequency of the middle A note to either 440 or 442 Hz. By matching this setting to the frequency of the middle A of an external MIDI sound generator, it is possible to match the sounds output by the sound generator with those output by the guitar itself. Changing the MASTER TUNE setting will change the guitar tuner reference pitch, however, so please retune as described on p. 6.

<Procedure>

1. Use the PARAMETER – or + button to select 8. MASTER TUNE.

2. Use the VALUE – or + button to set the value.

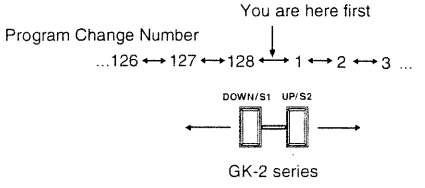
440.0 Hz

442.0 Hz

Changing the Sounds Played by the External Generator

Using the GI-10 with the GK-2 series

In P. PLAY MODE, the S1/S2 switches (on the GK-2 Series unit connected to the GI-10) can be used to send Program Change messages (MIDI data to change sounds) to the MIDI equipment connected to the GI-10 MIDI OUT connector. Program change numbers 1 to 128 can be sent from the GI-10.
At the power-up defaults, pressing the S2 switch will send Program Change number 1, and pressing S1 will send number 128. Press the S2 switch successively to increase the Program Change number, or the S1 switch to decrease it.



When a Program Change message is sent to the external MIDI device, the display will show the Program Change number for several seconds.

* **Whenever you want to quickly return to Program Change number 1, simply press both the S1 and S2 switches at the same time.**

* **Bank Select messages, which are necessary for selecting sounds on a GS sound module, will not be output.**

NOTE

The Program Change message sent to the external MIDI device will vary depending on whether the system is in Poly mode or Mono mode.

Poly mode:
The Program Change message for the channel specified in C. MIDI CH (p. 9).

Mono mode:
The six Program Change messages starting from the channel specified in C. MIDI CH.

Using a Foot Controller

Ordinarily, while the Play mode is set to GK, none of the MIDI messages received at MIDI IN will be output from the MIDI OUT connector. However, you can perform the steps below to switch the unit so it will thereafter look for any Program Changes that arrive at MIDI IN, and send them on out through MIDI OUT.

<Enabling GK mode Program Changes>

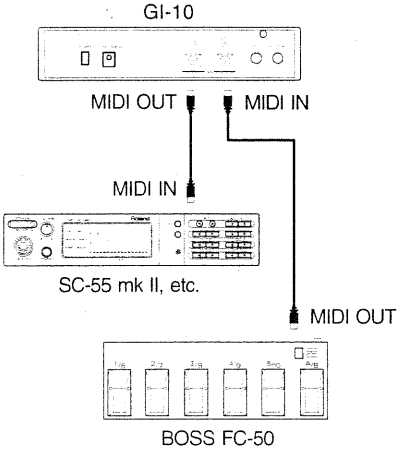
1. Turn OFF power on the GI-10.

2. Hold down the VALUE + button while you turn power back ON.

The following will be displayed for a few seconds:

* **GK mode Program Changes will remain enabled until you turn the power off.**

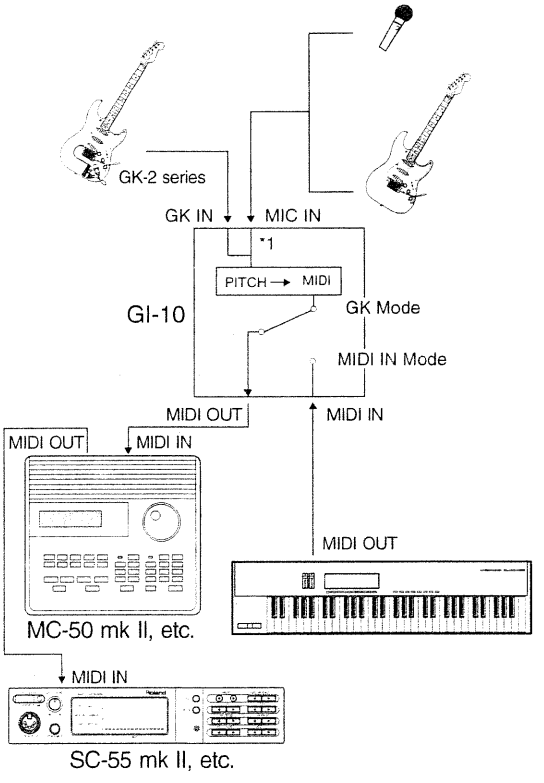
After enabling processing of Program Changes for the GK mode, a MIDI foot controller (BOSS FC-50; sold separately) can be connected to the GI-10 MIDI IN connector and be used to change the sounds played by the external sound generator. For more information, refer to the manual for your foot controller.



Adding Keyboard Input

When inputting performance data into an external MIDI sequencer, there may be times when it is easier to use a MIDI keyboard or drum pad. Set the GI-10 play mode to MIDI IN so that the data from the MIDI equipment connected to the MIDI IN connector is sent without modification to the MIDI OUT output. If a MIDI keyboard (Roland PC-200, etc.) is connected to the GI-10 MIDI IN connector, then it is possible to switch between keyboard input and guitar input by merely switching play modes. See p. 6 for details on switching the play mode.

Connection



***1 If the play mode is set to MIDI IN, performance data from equipment connected to the GK IN connector or MIC IN jack will not be output through MIDI OUT. To send this data through MIDI OUT, switch to the GK mode. (p. 9)**

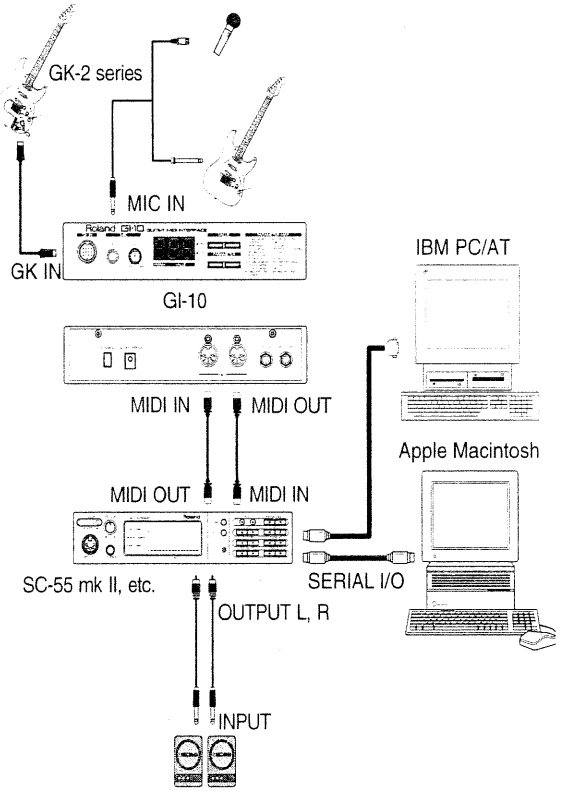
Changing GI-10 parameters remotely using an external MIDI device

Exclusive messages can be used to change GI-10 parameters when sent by an external MIDI sequencer.

What are Exclusive Messages?

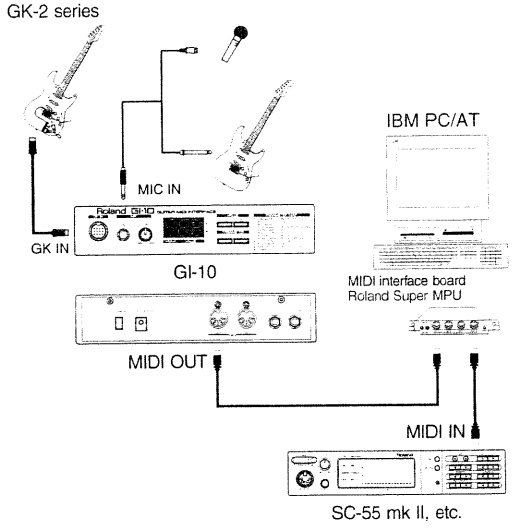
Exclusive messages are MIDI data which are specific to a particular manufacturer or particular model.

Directly connecting to computer device with serial interface

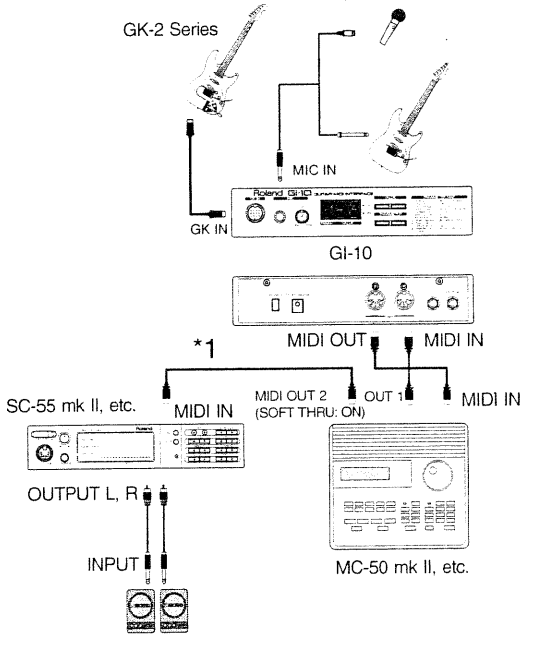


* We recommend that you use a Roland Super MPU MIDI interface (S-MPU/PC, S-MPU/AT; separately available) when using the GI-10 with a computer. This is because the GI-10 can generate a very large amount of MIDI data (needed to smoothly express delicate pitch changes), and the serial port (RS-232C) on a computer may not be able to handle the data reliably, leading to notes being dropped, or unwanted holds occurring.

Connecting with a computer equipped with MIDI processing unit



Connecting with a MIDI Sequencer



*1 If your sequencer only has one MIDI OUT and you wish to trigger a MIDI sound generator at the same time, use a MIDI Patch Bay (Roland A-880, etc.) to distribute the sequencer's MIDI OUT messages.

About the Data Received

The parameters of the GI-10 can be changed by receiving Exclusive messages from external MIDI device. Exclusive messages consist of:

F0H	Exclusive status	
41H	ID number	(Roland)
10H	Device ID	(fixed to 10H)
70H	Model ID	(GI-10)
12H	Command ID	(DT1)
aaH	Address MSB:	upper byte of first address of destination
bbH	Address:	middle byte of first address of destination
ccH	Address LSB:	lower byte of first address of destination
ddH	Data	
sum	Checksum	
F7H	EOX (end of exclusive)	

What is the Checksum?

The checksum is the value which equals zero when the address, size and checksum are added to it.

Assuming the Exclusive message address is aabbccH and the size is ddH, it would be calculated as follows:

aa + bb + cc + dd = sum
sum ÷ 80H = quotient... remainder
80H - remainder = checksum

* **For details on sending Exclusive data from a MIDI sequencer or desktop music software, refer to the relevant user's manuals.**

* **The MIDI implementation is not provided in this manual. If it is required, please contact customer service as listed at the end of this manual.**

* **A separate publication (optionally available) provides complete details on the way MIDI is implemented on this unit. Should you need this document (such as for byte-level programming), ask your dealer for the "MIDI Implementation."**

The addresses and data corresponding to various parameters in the GI-10 are given below.

Parameter	Address(H)	Data(H)	Description
MIDI CH	00 00 00	00	1CH
		01	2CH
		:	:
		0F	16CH
BEND RANGE	00 00 01	00	0
		01	2
		02	12
		03	24
POLY/MONO	00 00 02	00	MONO
		01	POLY
OCTAVE SHIFT	00 00 03	3F	DOWN
		40	NORMAL
		41	UP
BEND D.THIN	00 00 04	00	OFF
		01	NORMAL
		02	ON
ATTACK N.FLT	00 00 05	00	ON
		01	OFF
PEDAL ASSIGN	00 00 06	00	MODULATION
		01	EXPRESSION
TOUCH SENS	00 00 07	00	FINGER
		01	NORMAL
		02	HARD
		03	NO.DYNAMICS
PICKUP SENS#1	00 00 08	00-07	1-8
#2	09		
:	:		
#6	0D		
MASTER TUNE	00 00 0E	00	440 Hz
		01	442 Hz

<Example>

Setting the GI-10 MIDI transmit channel to 2

From the table, the MIDI CH address is 00 00 00H, and the data for channel 2 is 01H. The checksum would be 7FH, so the string is:

F0 41 10 70 12 00 00 00 02 7F F7

Sending this string from the external MIDI sequencer will change the GI-10 MIDI transmit channel to 2.

Meaning of the symbols:

- ● : When used with a guitar with a GK-2 series pickup.
- ▲ : When used with equipment connected to the MIC IN jack.
- ■ : When used with a MIDI keyboard connected to the MIDI IN connector.

External sound generator does not sound

● **Is the GK-2A volume set properly?**
Try increasing the volume of the GK-2A.

● ▲ ■ **Is the volume being reduced by the EV-5?**
Try depressing the EV-5 pedal.

● ▲ **Is the microphone level too low?**
Try increasing the microphone level.

● ▲ **Is the play mode set to GK?**
Unless it is set to the GK mode, performance data will not be output.
Set it to the GK mode (p. 9).

■ **Is the play mode set to MIDI IN?**
Unless it is set to MIDI IN, performance data will not be output.
Set to the MIDI IN mode (p. 6).

● **Is anything connected to the MIC IN jack?**
The MIC IN jack has priority, so if anything is connected to the MIC IN jack the performance data from GK IN will not be output.
Disconnect the plug from MIC IN.

● ▲ ■ **Are the transmit and receive MIDI channels the same?**
Set them to the same number (p. 9).

Only one string sounds on external sound generator (others do not).

● **Are you trying to send six channels in Mono mode to a sound generator that cannot receive six at once?**
Change to Poly mode (p. 9).

Pitch is not correct.

● ▲ ■ **Are the bend ranges set the same for send and receive?**
If not, match the two bend ranges.

Pitch does not change smoothly.

● **Are you sending in the Poly mode?**
In the Poly mode, pitch changes are sent in semitone steps if chords are played (p. 9, 10). Either play using single notes, or send in Mono mode.

● ▲ **Is Bend Range set to 2?**
Use as high a Bend Range setting as possible for both send and receive (p. 9, 11).

● ▲ **If Bend Range is set to 0, pitch change will take place in semitone steps.**
Set the optimum bend range (p. 9, 11).

Chords are not expressed accurately

▲ **Is a chord being input to the MIC IN jack?**
The MIC IN jack cannot recognize chord data; play single notes only.

The note data input to the sequencer doesn't match the actual notes played.

● ▲ **To rapidly convey the initial portions of every note played, and express smooth pitch changes, the GI-10 is designed to employ a combination of note and bend data in order to express changes in pitch. So, if you are viewing only the note data as recorded by the sequencer, it may appear to be different than what was played.**

If continuous pitch changes are not needed, set the transmitted Bend Range to 0.

Notes Dropped, Unwanted Holds Occur

● ▲ **In order to rapidly convey the initial portions of each note, and seamlessly express every subtle change in pitch, the GI-10 transmits a large amount of MIDI data. However, if you are connected to another unit using the serial connector (RS-232C), you could experience problems (notes left out, or held without reason) because of the volume of data generated.**

To avoid such problems, you could use a MIDI interface such as the Roland Super MPU (S-MPU/PC or S-MPU/AT; sold separately). Alternately, if you really have no need for smooth pitch changes, you could get the unit to stop sending bend messages by setting the Bend Range to "0."

Parameter List

Parameter	Value	Display	Page
P. PLAY MODE	**GK**		P.6
	MIDI IN		P.6
C. MIDI CH	**1**-16 CH		P.9, 11
b. BEND RANGE	0, 2, **12**, 24		P.9, 11
1. POLY/MONO	**POLY**		P.9
	MONO		
2. OCTAVE SHIFT	down		P.15
	normal		
	up		
3. BEND D.THIN	off		P.14
	normal		
	on		

Parameter	Value	Display	Page
4. ATTACK N.FLT	**off**		P.14
	on		
5. PEDAL ASSIGN	**Expression**		P.15
	Modulation		
6. TOUCH SENS	finger		P.16
	normal		
	hard		
	no.dynamics		
7. PICKUP SENS	1-**4**-8		P.7
8. MASTER TUNE	**440.0 Hz**		P.16
	442.0 Hz		
9. TUNER			P.6

* The factory default settings are shown in bold.

Restoring the Default Settings (Initialization)

Carry out the steps below to restore all the settings the unit had when it was shipped from the factory (initialize it).

< Procedure >

1. Turn the power OFF.

2. While holding down both the – and + PARAMETER buttons, switch the power back ON.

You should see the confirmation message shown below, which will be blinking.

3. Press the VALUE + button.

This starts the initialization process. (The message below will be shown while the unit is being initialized.)

Guitar MIDI Interface
Model GI-10

MIDI Implementation Chart

Date : Aug. 24, 1994
Version : 1.00

Function...		Transmitted	Recognized	Remarks
Basic Channel	Default	1 — 16	x	*1
	Changed	1 — 16	x	
Mode	Default	Mode 3, 4 (M=6) *1	Mode 1	
	Messages	x	x	
	Altered	**********		
Note Number :	True Voice	0 — 127	x	
		**********		
Velocity	Note ON	O 9n v=1— 127	x	
	Note OFF	x 9n v=0	x	
After Touch	Key's	x	x	
	Ch's	x	x	
Pitch Bend		x	O	
Control Change	1	O	x	Modulation
	7	O	x	Volume
	11	O	x	Expression
	64	O	x	Hold 1
	120	O	x	All sound off
Prog Change	: True #	x	O	
		**********	0 — 127	Program number 1—128
System Exclucive		O	O	
System Common	: Song Pos	x	x	
	: Song Sel	x	x	
	: Tune	x	x	
System Real Time	: Clock	x	x	
	: Commands	O	x	
Aux Message	: Reset all controllers	O	x	
	: Local ON/OFF	x	x	
	: All Notes OFF	O	x	
	: Active Sense	O	x	
	: Reset	x	x	
Notes		* 1 Can be memorized after powering off.		

Mode 1 : OMNI ON, POLY Mode 2 : OMNI ON, MONO O : Yes
Mode 3 : OMNI OFF, POLY Mode 4 : OMNI OFF, MONO X : No

SPECIFICATIONS

GI-10 Guitar MIDI Interface

Display
8-segment, 3-character LED

Connectors/Jacks
GK IN Connector
MIC IN Jack
EXP PEDAL (Expression jack)
HOLD Jack
MIDI Connectors (IN, OUT)
AC Adaptor Jack

Power Supply
DC 9 V (AC adaptor)

Power Consumption
260 mA

Dimensions
217 (W) x 235 (D) x 45 (H) mm
8-9/16 (W) x 9-5/16 (D) x 1-13/16 (H) inches

Weight
1.3 kg (excluding AC adaptor)
2 lbs 14 oz

Accessories
User's Manual
AC Adaptor
Special Cable (C-13C; 2 meters)
MIDI Cable (1 meter)

Optional Accessories (sold separately)
GK-2A Synthesizer Driver
EV-5 Expression Pedal
DP-2 or BOSS FS-5U foot switch
(FS-5U connection cable: Roland PCS-31)

Product specifications and/or appearance are subject to change without notice.

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T

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V

VALUE button 4

For the U.K.

IMPORTANT: THE WIRES IN THIS MAINS LEAD ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE.

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured BLACK.
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured RED.

For Germany

Bescheinigung des Herstellers/Importeurs

Hiermit wird bescheinigt, daß der/die/das

GUITAR MIDI INTERFACE GI-10

(Gerät, Typ, Bezeichnung)

in Übereinstimmung mit den Bestimmungen der BMPT-AmtsblVfg 243/1991 funk-entstört ist. Der vorschriftsmäßige Betrieb mancher Geräte (z. B. Meßsender) kann allerdings gewissen Einschränkungen unterliegen. Beachten Sie deshalb die Hinweise in der Bedienungsanleitung.

Dem Zentralamt für Zulassungen im Fernmeldewesen wurde das Inverkehrbringen dieses Gerätes angezeigt und die Berechtigung zur Überprüfung der Serie auf die Einhaltung der Bestimmungen eingeräumt.

Roland Corporation
4-16 Dojimahama 1-Chome Kita-ku Osaka 530 Japan

(Name und Anschrift des Herstellers/Importeurs)

For the USA

FEDERAL COMMUNICATIONS COMMISSION RADIO FREQUENCY INTERFERENCE STATEMENT

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Unauthorized changes or modification to this system can void the users authority to operate this equipment.
This equipment requires shielded interface cables in order to meet FCC class B Limit.

For Canada

CLASS B **NOTICE**

This digital apparatus does not exceed the Class B limits for radio noise emissions set out in the Radio Interference Regulations of the Canadian Department of Communications.

CLASS B **AVIS**

Cet appareil numérique ne dépasse pas les limites de la classe B au niveau des émissions de bruits radioélectriques fixés dans le Réglement des signaux parasites par le ministère canadien des Communications.

Information

When you need repair service, call your local Roland Service Station or the authorized Roland distributor in your country as shown below.

U. S. A.

Roland Corporation U.S.
7200 Dominion Circle
Los Angeles, CA. 90040-3696, U. S. A.
TEL: (213) 685 5141

CANADA

Roland Canada Music Ltd. (Head Office)
5480 Parkwood Way
Richmond B. C., V6V 2M4
CANADA
TEL: (604) 270 6626

Roland Canada Music Ltd. (Montreal Office)
9425 Transcanadienne
Service Rd. N., St Laurent,
Quebec H4S 1V3, CANADA
TEL: (514) 335 2009

Roland Canada Music Ltd. (Toronto Office)
346 Watline Avenue,
Mississauga, Ontario L4Z 1X2, CANADA
TEL: (416) 890 6488

AUSTRALIA

Roland Corporation Australia Pty. Ltd.
38 Campbell Avenue
Dee Why West. NSW 2099
AUSTRALIA
TEL: (02) 982 8266

NEW ZEALAND

Roland Corporation (NZ) Ltd.
97 Mt. Eden Road, Mt. Eden,
Auckland 3, NEW ZEALAND
TEL: (09) 3098 715

UNITED KINGDOM

Roland (U.K.) Ltd.
Rye Close Ancells Business Park Fleet, Hampshire GU13 8UY, UNITED KINGDOM
TEL: (0252) 816181

Roland (U.K.) Ltd., Swansea Office
Atlantic Close, Swansea Enterprise Park, Swansea,
West Glamorgan SA79FJ,
UNITED KINGDOM
TEL: (0792) 700 139

IRELAND

The Dublin Service Centre Audio Maintenance Limited
11 Brunswick Place Dublin 2
Republic of Ireland
TEL: (01) 677322

ITALY

Roland Italy S. p. A.
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Roland Elektronische Musikinstrumente Handelsgesellschaft mbH.
Oststrasse 96, 22844
Norderstedt, GERMANY
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FRANCE

Guillard Musiques Roland
ZAC de Rosarge Les Echets 01700
MIRIBEL FRANCE
TEL: (72) 26 5060

Guillard Musiques Roland (Paris Office)
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DK-1023 Copenhagen K.
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SF-02101 Espoo FINLAND
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SWITZERLAND

Roland (Switzerland) AG
Musitronic AG
Gerberstrasse 5, CH-4410
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AUSTRIA

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Neu-Rum Siemens-Strasse 4
A-6040 Innsbruck P.O.Box 83
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TEL: (0512) 26 44 260

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Bouboulinas 54 St. 106 82
Athens, GREECE
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PORTUGAL

Caius - Tecnologias Audio e Musica , Lda.
Rue de Catarina 131
4000 Porto, PORTUGAL
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HUNGARY

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Budapest HUNGARY
TEL: (1) 1868905

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Twin Towers, 33 Jabntinsy St.
Room 211, Ramat Gan 52511
ISRAEL
TEL: (03) 751 8585

CYPRUS

Radex Sound Equipment Ltd.
17 Diagorou St., P.O.Box 2046, Nicosia CYPRUS
TEL: (2) 453 426
(2) 466 423

U.A.E

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P.O. Box 8050
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QATAR

Badie Studio & Stores
P.O.Box 62,
DOHA Qatar
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SYRIA

Technical Light & Sound Center
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BAHRAIN

Moon Stores
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Mesones No. 21 Col. Centro
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Musicland Digital C.A.
Av. Francisco de Miranda,
Centro Parque de Cristal,
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TEL: (2) 285 9218

PANAMA

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REP. DE PANAMA
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Instrumentos Musicales S.A.
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TEL: (1) 394 4029

HONG KONG

Tom Lee Music Co., Ltd. Service Division
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KOREA

Cosmos Corporation Service Station
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330 Verng Nakorn Kasem,
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SOUTH AFRICA

That Other Music Shop (PTY) Ltd.
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Braamfontein 2001
Republic of South Africa
TEL: (011) 403 4105

Paul Bothner (PTY) Ltd.
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Claremont 7700
Republic of South Africa
TEL: (021) 64 4030

As of Dec. 19. 1994

マイク・インを使用するにあたってのご注意

●マイク・イン・ジャックにマイクを接続している際は、なるべくマイクを口に近づけて "タ"、"トゥ"などアタックの強い音で入力してください。

●歌詞などを、そのまま歌って入力しても正しくMIDI情報に変換されません。

●マイクを用いて、サックスの音など、声以外の音をMIDI情報に変換する場合、マイクのセッティングによっては、正しくMIDI情報に変換されないことがあります。

●マイク・イン・ジャックへは単音を入力してください。和音を入力すると、正しくMIDI情報に変換されません。

●マイク・イン・ジャックにギターを接続している場合、弾き方によっては、低音弦に対するMIDI変換処理が、GKイン・コネクターにデバイデッド・ピックアップ搭載ギターを接続している場合より遅くなることがあります。

●マイク・インの入力音域はE2～D6です。
これ以外の音を入力した場合、正しくMIDI情報の変換が行なわれないことがあります。

●マイク、ギター以外の機器を接続しても、単音であればMIDI信号に変換することは可能ですが、機器によっては、正しくMIDI情報の変換が行なわれないことがあります。

●マイク・インの最大入力レベルは230mV(RMS)です。
これ以上のレベルで入力すると、正しくMIDI情報の変換が行なわれないことがあります。

How to Assure the Best Results Using the MIC IN Jack

●When using a microphone, try to keep your mouth fairly close to the microphone, and enunciate each sound separately and distinctly (a strong attack portion is helpful).

●If lyrics are simply sung in consecutive, normal fashion, the conversion to MIDI may not be correct.

●When wishing to convert sounds other than the human voice (such as the sound of a saxophone), the type of microphone you use and the way you have it set up are important factors that will affect the correctness of the conversion to MIDI.

●To assure an accurate MIDI conversion, do not play chords. Play individual notes one by one.

●When you have an electric guitar connected to MIC IN, the response of the conversion to MIDI for the lower pitched strings may be slower compared with using an electric guitar (equipped with a divided pickup) that is connected to the GK IN connector.

●The recognizable note range for input to the MIC IN jack is E2 through D6. You cannot expect a reliable conversion to MIDI if the unit receives notes that do not fall within this range.

●As long as individual notes are sounded, various devices other than a microphone or guitar can be used for input. However, you may not always be able to obtain a satisfactory conversion to MIDI.

●The maximum permissible input level for the MIC IN jack is 230 mV (RMS). Should you apply input that exceeds this level, do not expect the conversion to MIDI to be reliable.

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